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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/466,219	06/06/95	HANDFIELD M	MCLA-0112-PU

B2M1/0815

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EXAMINER	
UEN, W	#6
ART UNIT	PAPER NUMBER
2214	

DATE MAILED: 08/15/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary	Application No. 08/466,219	Applicant(s) Handfield et al.
	Examiner William Oen	Group Art Unit 2214

☒ Responsive to communication(s) filed on *Jul 1, 1996* .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-23* is/are pending in the application.

Of the above, claim(s) *None* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-23* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Part III DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claims 1-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gerresheim et al. in view of Merz.

Gerresheim et al. teach, for example in Figure 2A and in columns 5-7, all of the essential features of the instant invention including a system for monitoring a parameter (e.g., temperature or pressure) of a tire for a vehicle, said system comprising:

a sensor (12 or 13), disposed within a tire 10, for generating a signal indicative of the parameter (here, pressure) of the tire,

a transmitter (16 or 17), in electrical communication with the sensor (12 or 13) and with the first end of an electromagnetic path, for transmitting the electromagnetically generated signal along the electromagnetic path,

a receiver (18 or 21), in electrical communication with the second end of the electromagnetic path, for receiving a path signal at the electromagnetic path's second end, the path signal being responsive to the generating signal, and

a monitor 20, in electrical communication with the receiver (18 or 21), for monitoring the tire parameter by monitoring the path signal(s).

It is further noted that Gerresheim et al. teach the monitoring of both tire pressure and tire temperature, and also perform the step of comparing these parameters to selected

threshold values (See, for example, figures 5 and 6 of Gerresheim et al).

It is noted, however, that Gerresheim et al. do not explicitly disclose that the electromagnetic path through which the electromagnetic signals are transmitted is necessarily formed of a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc. It is noted that Merz does teach, (for example in figure 2), a tire monitoring system wherein the electromagnetic path through which the electromagnetic signals are transmitted that is formed of a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc. In view of this aforementioned teaching by Merz, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have arranged the transmitters (16 or 17) and receivers (18 or 21) of Gerresheim et al. so as to form an electromagnetic path through a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc., if desired. This is obvious because it allows for the placement of the transmitters (16 or 17) of Gerresheim et al. to be conveniently positioned on the inside base of the wheel rim, and it allows for the placement of the receivers (18 or 21) of Gerresheim et al. to be conveniently positioned across from the inside base of the wheel rim. Gerresheim et al. and Merz are combinable because

each reference discloses an electromagnetic tire monitoring system.

Particular sensor structures (e.g., plate capacitive pressure sensors) in the tire monitoring system of Gerresheim et al. as modified by Merz are considered a matter of obvious choice in design clearly within the purview of one having ordinary skill in the art at the time of the invention inasmuch as a plethora of various sensor structures are notoriously well-known.

Similarly, intermittent operation, e.g., operational at periodic intervals, of the sensor in the tire monitoring system of Gerresheim et al. (as modified by Merz), and the inclusion of the vehicle ground plane as part of the electromagnetic path in the tire monitoring system of Gerresheim et al. (as modified by Merz), are considered a matters of obvious choice in design clearly within the purview of one having ordinary skill in the art at the time of the invention. The former is obvious inasmuch as continuous operation is not always necessary and intermittent operation is often advantageous as, for example, by its operational cost savings. The latter is obvious inasmuch as the inclusion of the vehicle ground plane as part of the electromagnetic path in the tire monitoring system of Gerresheim et al. (as modified by Merz) would be simple and space-efficient.

Response to Amendment

Applicant's arguments filed July 1, 1996 have been fully considered but they are not deemed to be persuasive.

Applicant argues that "Merz arguably discloses an electromagnetic path, [but] the electromagnetic path does not include conductive components of the vehicle." Applicant goes on to argue that "the electromagnetic path [of Merz's invention] is formed by magnet (72') sensors (33'), (34') and coil (100)", and concludes that "Merz neither suggests nor discloses the use of conductive components of a vehicle as part of the electromagnetic path...". Although it is true that Merz uses a magnet (72') sensors (33'), (34') and coil (100)" to generate and receive the electromagnetic signal, Applicant also uses such features. The use of a coil and sensors, however, does not preclude the fact that the *path through which the electromagnetic field propagates* can include parts of the vehicle itself, e.g., a wheel rim, one or more wheel bearings, (which Merz explicitly teaches), or even the ground plane of a vehicle.

Because Merz does teach a tire monitoring system wherein the electromagnetic path through which the electromagnetic signals are transmitted that is formed of a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc., the rejection under 35 U.S.C. § 103 of claims 1023 as being unpatentable over Gerresheim et al. in view of Merz

stands as proper. Further, as pointed out in the foregoing Office Action, the inclusion of the vehicle ground plane as part of the electromagnetic path in the tire monitoring system of Gerresheim et al. as modified by Merz, is considered to be a matter of obvious choice in design clearly within the purview of one having ordinary skill in the art at the time of the invention, inasmuch as the inclusion of the vehicle ground plane as part of the electromagnetic path in the tire monitoring system of Gerresheim et al. as modified by Merz would be simple and space-efficient.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to William L. Oen whose telephone number is (703) 308-5161.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Richard E. Chilcot, can be reached by calling (703) 305-4716. The telefax number for this Group is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.

wlo
August 6, 1996

RICHARD CHILCOT
SUPERVISORY PATENT EXAMINER
GROUP 2200